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BULLETIN  
OF THE  
TORREY BOTANICAL CLUB

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FEBRUARY, 1910

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The ferns and flowering plants of Nantucket—VI

EUGENE P. BICKNELL

CHENOPODIACEAE

CHENOPODIUM ALBUM L.

A common weed of waste places, cultivated fields, and sandy shores, displaying several pronounced phases of variation ; begins to flower in July.

A pale and narrow-leaved littoral form is sometimes suggestive of *Chenopodium leptophyllum* Nutt. Another form often found along shores, growing in pure sand, has early deciduous leaves and, in September, its leafless stem and even the crowded panicles often become highly colored with deep reddish purple.

\* CHENOPODIUM PAGANUM Reich. Fl. Germ. 579. 1830.

*C. viride* L. Sp. Pl. 219, in part — probably.

*C. album*, var. *viridescens* St. Am. Fl. Agen. 105. 1821.

Frequent. This is a common companion of *C. album*, distinguished from it by its bright or deep green color and almost non-farinose character. It appears not to have received any attention in this country as a different plant from true *C. album* but has long been definitely recognized by many European botanists under one or another name, often being erroneously referred to *C. viride*. It is well described by Reichenbach, De Candolle, Saint Amans, Moquin-Tandon, and other authors. Although closely related to *C. album* it presents a number of marked and fairly constant differences which are strikingly obvious upon comparison of the living plants. In addition to its bright green color

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and general absence of mealiness, it is characterized by thinner and larger, very long-petioled primary leaves, sometimes over 5 cm. wide, which are more broadly cuneate at base and usually more irregularly and acutely sinuate-toothed, and even aristulate-acute; a larger fruiting calyx with more sharply and abruptly carinate sepals; a somewhat larger utricle, flatter and rather more abruptly contracted around the edge to a blunter margin and usually darker and more distinctly rugulose-pitted. This plant often becomes coarser and taller and more widely branched than *C. album* and its flowering period appears to be somewhat later.

\* *CHENOPODIUM LANCEOLATUM* Muhl.

*C. viride* L. in part.

Occasional or frequent, especially along shores.

This plant is nearer to *C. paganum* than to *C. album* but in its typical form is widely different in appearance from either. It varies from bright green with little or no mealiness to paler green and somewhat scurfy-farinose. It is often low and diffuse and slenderly much branched, the inflorescence consisting of scattered glomerules on very delicate or even thread-form flexuous branchlets, the leaves lanceolate to linear-lanceolate and entire or subentire, the uppermost reduced to narrowly linear bracts subtending many of the glomerules.

The citations underlying the *Chenopodium viride* of Linnaeus make it appear that his species was made up of three distinct factors. One of these was probably the plant later described by Reichenbach as *C. paganum*; another seems more certainly to have been the plant proposed over half a century later by Muhlenberg as *C. lanceolatum*. The remaining citation alone refers to a published plate and may therefore be taken as fixing the type of the species. This plate represents the European plant known as *C. opulifolium* of Schrader and, indeed, formed the basis of that species.

\* *CHENOPODIUM MURALE* L.

Occasional or frequent in waste places in or near the town; Madequet; Siasconset. When growing in dry, sandy soil it is sometimes much reduced in size, with small somewhat fleshy leaves abruptly narrowed to the petiole, and contracted panicles;

in richer soil and more shaded situations it becomes much larger and brighter green, with thinner, acutely cut-sinuate leaves, narrowed to a slender petiole, and with larger looser panicles. Flowers from July and early August.

CHENOPODIUM HYBRIDUM L.

Siasconset, Sept., 1899 — a few large plants in waste ground ; not observed since. Mentioned in Mrs. Owen's catalogue as having been seen once in waste ground in the town.

CHENOPODIUM RUBRUM L.

Shores of Sachacha Pond, in full flower and fruit Sept. 16, 1899 ; sparingly at Miacomet Pond ; abundant on Coskaty in sand along the ocean shore, where it was in full flower Aug. 14, 1906.

\* CHENOPODIUM AMBROSIODES L.

Street-sides and waste places about town and in neglected barnyards in the suburbs ; apparently spreading ; by a barn on Great Neck, 1904 ; farm yard in Polpis, 1906. It was frequent in the town streets as far back as 1899. Flowering from July and early August.

*Note.* — *Chenopodium Botrys* L. is included in Mrs. Owen's catalogue, although *C. ambrosioides* is not mentioned.

ATRIPLEX HASTATA L.

Common along shores and brackish marshes. It displays much variation, narrower-leaved states appearing to approach *A. patula* L. A pronounced form, found near the shore of Long Pond and elsewhere, almost concealed among taller surrounding plants, was bright green and nearly prostrate with wide-spreading flatly interlaced branches and very large lower leaves becoming 14 cm. wide. Flowers through August and September. Earliest leaves beginning to appear May 30, 1909.

ATRIPLEX ARENARIA L.

A characteristic plant of the sea-beaches, flowering through August and September.

SALICORNIA EUROPEA L.

Common on salt marshes and mud flats throughout. It is especially abundant on brackish marshes at the south shore, where,

in autumns favorable to its highest color development, it forms extensive reaches of vivid scarlet. At the middle of June the seedling plants are only 2-5 cm. high. In August and September it is in full flower. Anthers appearing sessile, 0.5 mm. long.

*SALICORNIA BIGELOVII* Torr.

Abundant on Coatue; rather common about Polpis Harbor; local at the western end of the island and along the harbor shore; flowering in August and September. Anthers appearing sessile, twice the size of those of *S. europea*. In late autumn it turns deep purple-red or claret color.

*SALICORNIA AMBIGUA* Michx.

Abundant on wet sand on Coatue, and occurring locally at all points where *S. Bigelovii* was found. Plant well developed by the middle of June, flowering in August and September. Anthers 1 mm. or more long on distinctly exerted filaments. In late autumn this species turns light yellowish or brownish red.

*DONDIA LINEARIS* (Ell.) Millsp.

Occurs rather sparingly along shores and the borders of salt marshes, flowering in August and September; along the harbor; Bache's Harbor; Coatue; western end of the island.

On Marthas Vineyard, where this species is very common, I have collected a form (it may occur on Nantucket also) which answers perfectly to the description of *Suaeda americana* (Pers.) Fernald, as interpreted by Fernald in *Rhodora* 9: 146. Au 1907. From observations made in the field in September and October I was unable to convince myself that this form was anything more than a state assumed by the common plant when more or less subject to tidal submersion. Its prostrate or semi-prostrate habit appeared to be the result of a heavier and more fleshy development under strongly saline influence.

\* *DONDIA MARITIMA* (L.) Druce.

Perhaps rather more common than *D. linearis* and often found with or near it, but usually in wetter places, flowering at the same seasons.

*SALSOLA KALI* L.

Common on sea-beaches, flowering in August and September. The seedling plants begin to appear early in June.

\* *SALSOLA CAROLINIANA* Walter.

Sparingly along the ocean side of Sachacha Pond and on the adjoining sea-beach.

## AMARANTHACEAE

*AMARANTHUS RETROFLEXUS* L.

Less common than the next; August, September.

\* *AMARANTHUS HYBRIDUS* L.

A common weed of cultivated fields and waste places; August, September. Either coarse and erect, or more slender and depressed with fewer and more elongated spikes. A single plant seen with purplish-tinged panicle.

*AMARANTHUS GRAECIZANS* L.

A common weed, sometimes abundant in cultivated fields flowering through summer and autumn.

\* *AMARANTHUS BLITOIDES* S. Wats.

Sparingly along the railroad on Washington Street, 1899 to 1907; farm yard in Polpis, 1906; in full flower August and September.

*AMARANTHUS PUMILUS* Raf.

"On the beach. S. T. Olney, 1849." (M. L. Owen, Cat. 50.) The range of this species is commonly given as extending no further east than Rhode Island, yet Olney's record is explicit and I know of no reason why it should not be accepted as authentic, especially in the case of so unmistakable a plant. Nor is this the only record of the occurrence of the species in Massachusetts. In Hovey's Magazine (13: 219. 1847), it is mentioned by William Oakes as having been found at Gay Head, Marthas Vineyard, in 1829.

## PHYTOLACCACEAE

*PHYTOLACCA DECANDRA* L.

Occasional in waste places near the town and in burned-over spots in the pine scrub; Quaise; Wauwinet. In full flower and fruit September 4, 1904.

AIZOACEAE

*MOLLUGO VERTICILLATA* L.

Very common, especially so on sandy levels about some of the south shore ponds. In full flower in August and September. Nothing was seen of it in June although in the same latitude it commonly begins to flower before the end of May.

PORTULACACEAE

*PORTULACA OLERACEA* L.

Frequent in cultivated fields and occasionally elsewhere; apparently nowhere common. Noticed in flower as late as September.

\* *PORTULACA GRANDIFLORA* Hooker.

Along a neglected roadway at Siasconset in September, 1899, in full flower; not observed since.

ILLECEBRACEAE

*SCLERANTHUS ANNUUS* L.

Abundant in sterile soil, doubtless flowering at all seasons.

CARYOPHYLLACEAE

*AGROSTEMMA GITHAGO* L.

Apparently uncommon. Mrs. Owen mentions it as seen occasionally in fields. I observed it only once, on June 9, 1908, not yet in flower-bud. In midsummer its conspicuous flowers might well show it to be more common.

*SILENE VULGARIS* (Moench) Garcke.

Observed at four places, by street-sides and in waste spots in the town, and also in an old field on the Benjamin Coffin farm. In fresh flower June 9, 1908; still in bloom Sept. 10, 1904.

\* *SILENE ANTIRRHINA* L.

A scattered group of very small plants on a bank near Acquidness Point, June 2, 1909, the flower buds just appearing.

*SILENE ARMERIA* L.

An occasional garden escape into waste ground, not observed, however, since August, 1906.

\* *SILENE DICHOTOMA* Ehrh.

I failed to meet with this species but have seen specimens collected on Nantucket as follows : "Sandy meadow lot, Aug. 13, 1897," *T. N. Vasey*, and "Nantucket Sept. 2, 1896," ex herb. E. & C. E. Faxon, in herb. N. Y. Botanical Garden ; "Maxcy's Pond, Aug., 1895," *Mrs. M. P. Robinson*, in herb. Nantucket Maria Mitchell Association.

*LYCHNIS ALBA* Mill.

Infrequent. Sparingly in a grain field west of the town June 6, 1909, in full flower and with large capsules ; one station at Wauwinet, June 11, 1909, just in bloom ; still in flower Sept. 18, 1907, in a grassy lot on Lily Street.

\* *LYCHNIS DIOICA* L.

Occasional by street-sides and in hay and clover fields near the town ; Shawkemo. First flowers June 2, 1909 ; still in full bloom Sept. 11, 1904, and Sept. 18, 1907.

*SAPONARIA OFFICINALIS* L.

Roadsides and waste places, common in the town and suburbs. In full flower August and September, the flowers often double.

*DIANTHUS ARMERIA* L.

Scarce. Two sheets are in the herbarium of the Nantucket Maria Mitchell Association, one from "grassy field back of 'the Cliff,' Aug. 15, 1891," one collected in a field on the Madequet road, Aug. 20, 1891, by *Mrs. Nellie F. Flynn*. I observed it only on Grove Lane, a few plants not yet in flower, June 17, 1908. *Mrs. Owen* has recorded it from Siasconset.

*ALSINE MEDIA* L.

Abundant and doubtless to be found in flower at all seasons.

\* *ALSINE GRAMINEA* (L.) Britton.

A few plants in a low pasture near Monomoy in full flower June 7, 1908.

*CERASTIUM VULGATUM* L.

Everywhere in grassy places. In full flower May 30, 1909, but many plants only just in bud ; mostly out of bloom by August, although occasional flowers may be found in September.



\* CERASTIUM SEMIDECANDRUM L.

Common in and near the town in sandy fields and lots and along roadsides ; abundant all over the sandy level by the hotel at Wauwinet, June 11, 1909 ; near Miacomet Pond. In full flower and fruit May 30, 1909, evidently blooming much earlier than *C. vulgatum*. The two species are frequently found together and when thus seen side by side the differences between them are strikingly apparent. *C. semidecandrum* is decidedly the more viscid-pubescent and particles of sand and other foreign substances often adhere thickly to its viscid cymes.

CERASTIUM ARVENSE L.

A characteristic plant of the island growing everywhere in sandy fields, on dry banks and along roadsides. In May and early June it is conspicuous from the abundance of its pure white flowers ; by August it is mostly dried up and little noticeable. In full flower May 30, 1909 ; passing out of bloom June 7, 1908, and no flowers seen after June 15.

SAGINA PROCUMBENS L.

Frequent, and widely scattered over the island. Often found growing in the crevices of brick sidewalks in the town and common on damp levels by some of the ponds on the south shore ; Surfside ; head of Tom Never's Swamp ; Siasconset ; near Hummock Pond.

Sometimes growing in contracted tufts in pure white sand. In full flower from May to September.

ARENARIA SERPYLLIFOLIA L.

Common, usually in poor or sandy soil in dry places. In full flower May 30, 1909, mostly dried up by mid-August.

MOEHRINGIA LATERIFLORA (L.) Fenzl.

Common or, locally, even abundant in or about thickets on the eastern side of the island through Shimmo, Shawkemo, Quaise, and Polpis, to Pocomo and Squam ; Tom Never's Swamp ; Coskaty ; among the cedars on Coatue. Just in flower June 2, 1909 ; mostly dried up by the middle of August.

**Ammodenia maritima** (Raf.) comb. nov.

*Adenarium maritimum* Raf. New Fl. N. Am. 1 : 62. 1836.

*Arenaria peploides* L., var. *robusta* Fernald, Rhodora 11 : 114. 1909.

On the coast sands all around the island, sometimes massed in great abundance along or among the dunes near the shore. Just in flower June 7, 1909.

SPERGULA ARVENSIS L.

In cultivated fields and along roadsides ; common and widely spread. First flowers June 3, 1909 ; continuing to bloom through September.

\* TISSA CANADENSIS (Pers.) Britton.

Observed only on Coatee ; in full flower and fruit Sept. 7, 1904. Plants small, often forming compactly much branched tufts 6-16 cm. in diameter ; sepals obtuse or rounded at apex, about half the length of the oblong-ovoid obtuse capsule ; seeds 1 mm. in diameter, dark brown, wingless, roughened with minute points. Agrees closely with typical examples of *Tissa canadensis* from much further north except that it is not wholly smooth but more or less finely glandular-pubescent, at least in its upper parts. I met with the same plant, in October, 1909, on Chappaquiddick Island, Marthas Vineyard, the most southern point, I think, except Nantucket, from which it has been reported.

TISSA MARINA (L.) Britton.

Common on salt marshes and brackish shores ; observed in flower from early June until late September.

Plants larger throughout than those of *Tissa canadensis* and more widely branched, sometimes spreading over 4 dm., more pubescent and with longer leaves and internodes and larger more acute sepals and capsule, the latter little exserted ; seeds smooth, only half the size of those of *T. canadensis*, 0.5 mm. in diameter, and paler in color. No winged seeds were found in any Nantucket specimen.

TISSA RUBRA (L.) Britton.

Common in dry sandy places, often in waste ground. Observed in flower from May until late September.

## NYMPHAEACEAE

BRASENIA SCHREBERI Gmel.

In a number of ponds and pools mainly on the eastern side of the island.

*NYMPHAEA ADVENA* Ait.

Mrs. Owen's catalogue reports the spatterdock as not uncommon. I saw nothing of it nor did I succeed by inquiry among the islanders in ascertaining where it grew or had once grown. Since then, however, a letter from Mrs. Mary A. Albertson, Curator of the Nantucket Maria Mitchell Association, has informed me that it has been found by Miss Grace B. Gardner and by Mr. Walter Burdick in a little cove at the east end of Sachacha Pond.

*CASTALIA ODORATA* (Ait.) Woodville & Wood.

Common. Just in bloom June 17, 1908; observed still in flower as late as the middle of September.

A colony of pond lilies bearing large bright pink flowers was found in Squam, Aug. 13, 1906, in a small deep pool almost hidden by surrounding shrubbery. The locality is in an uninhabited part of the island and the plants had every appearance of being native, but I have been informed by Mrs. Albertson that the pink pond lily is known to have been planted somewhere in that section of the island.

CERATOPHYLLACEAE

*CERATOPHYLLUM DEMERSUM* L.

Abundant in Long, Hummock, and Miacomet ponds; Washing Pond. Not observed in flower or fruit.

RANUNCULACEAE

*COPTIS TRIFOLIA* (L.) Salisb.

The goldthread is included without comment in Mrs. Owen's catalogue. When on Nantucket I was not able to learn anything of the status of the species as an island plant and concluded that if it should possibly occur at the present day it must be extremely rare. I have since heard from Mrs. Albertson that she had recently been told by Miss Grace B. Gardner that it had been found by her in the "thorn lot." The reference is to the tract of land west of the town bordered by cockspur thorn trees which, Mrs. Owen has told us, were set out as a hedge about the year 1830.

\* *ACTAEA RUBRA* (Ait.) Willd.

This woodland species occurs along Rattlesnake Bank, where, in favorable seasons, it forms patches of luxuriant growth and fruits prolifically; a small colony was found also in a dense thicket in Quaise and a single sterile plant in Polpis. Bearing green fruit June 11, 1909; fruit matured Aug. 7, 1906.

\* *AQUILEGIA CANADENSIS* L.

Discovered in full flower June 2, 1909, near Acquidness Point, growing on a prominent knoll near the shore under a close thickety growth, mainly of bear oak, beach plum, and wild thorn (*Crataegus*). The colony consisted of perhaps thirty plants scattered over a space of about ten yards by three yards in general area. As this bright-flowered plant has never been reported from Nantucket it seems probable that it occurs at no other place on the island and, since the thicket which protects it is wholly isolated and almost surrounded by salt marshes, there is little chance of its ever being able to spread elsewhere.

*ANEMONE QUINQUEFOLIA* L.

Common in thickets and open low grounds. In full flower June 1, 1909; a few flowers remaining June 9.

\* *RANUNCULUS DELPHINIFOLIUS* Torr.

In Squam, near Wauwinet, Sept. 5, 1904, — a nearly dried-out pot-hole covered with a dense tangle of leafy runners, no flowers remaining; a few plants in a similar situation about half a mile distant; some young plants in a muddy pot-hole near Tristram Coffin's Homestead, Sept. 12, 1907.

*RANUNCULUS OBTUSIUSCULUS* Raf.

In two small pools near the Orange Street railroad crossing, where it was long ago discovered by Judge J. R. Churchill and Mr. Walter Deane; also in a pool east of the Creeks. First leaves appearing May 30, 1909; in full flower in August and some flowers remaining at the middle of September.

*RANUNCULUS ACRIS* L.

Abundant, conspicuously so when in full flower in the fields and meadows in and near the town. Generally in flower May 30, 1909, but not yet at its height of bloom; few or no flowers left by the second week in September.

The later leaves, as well as those which are produced by a second growth following the mowing of the fields or other injury, are usually less deeply and narrowly cleft than those of the spring and early summer and have broader segments [var. *Stevani* (Andrz.) Lange]. This is the common state of the plant in the autumn, but, in its extreme form, is scarcely to be found in the spring, when the typical state of the plant prevails.

RANUNCULUS BULBOSUS L.

Common throughout, preferring a drier, poorer soil than *R. acris*, and much less noticeable in the late summer and autumn, the branching parts appearing to wither earlier in the season. In full flower May 30, 1909; no flowers remaining by September.

RANUNCULUS REPENS L.

In luxuriant abundance everywhere in low meadows and springy places in the neighborhood of the town and often growing about yards and along street-sides; sometimes in out of the way bogs. In full flower May 30, 1909; a few flowers may be found as late as the middle of September.

OXYGRAPHIS CYMBALARIA (Pursh) Prantl.

Common on damp sandy levels about some of the south shore ponds; Capaum Pond; salt marshes along the Creeks; Polpis Harbor. First flowers June 8, 1909; some flowers as late as the middle of September.

\* THALICTRUM REVOLUTUM DC.

Rattlesnake Bank, not abundant, but growing with great vigor, some plants becoming nearly eight feet tall; Watt's Run Bank; thicket by shore pond east of Pocomo Head. Panicles well developed but not yet in flower June 11, 1908; well fruited Aug. 7, 1906.

THALICTRUM POLYGAMUM Muhl.

Mrs. Owen's catalogue records, on the authority of Mr. Dame, "a few depauperate specimens in swamps in Squam."

*Note.*—The barberry (*Berberis vulgaris* L.) is admitted to Mrs. Owen's catalogue upon the occurrence of a single plant found by Mr. Dame by the roadside near Siasconset. This was doubtless only a transient waif.

The Japanese *Berberis Thunbergii* DC. was twice observed in waste places near the town.

#### LAURACEAE

SASSAFRAS SASSAFRAS (L.) Karst.

Common in thickets, sometimes flowering when only three to four feet high. It is not often seen over ten feet in height, the largest trees occurring in Polpis and on Coskaty. First flowers June 4, 1909.

#### PAPAVERACEAE

CHELIDONIUM MAJUS L.

Almost confined to the town where it is common as a street-side and garden weed; occasional in waste ground at outlying points. In full flower May 30, 1909; in some seasons flowers are to be found up to the middle of September.

#### CRUCIFERAE

\* LEPIDIUM CAMPESTRE (L.) R. Br.

A recently introduced weed first observed in 1908 — a single plant by the wharves and a small group in a farm yard west of head of Hummock Pond; in flower and fruit June 10. In June of the following year two plants were seen on the wharves and a single plant by a roadside in Polpis.

LEPIDIUM VIRGINICUM L.

A very common weed, sometimes flowering casually before the middle of June, but not generally in bloom until later in the month. Forms occur with densely pubescent leaves, others with the lower leaves pinnate with pinnatifid segments, these variations answering to the characters adduced for the so-called varieties *pubescens* Schmitz and *pinnatifidum* Schultz.

\* LEPIDIUM DENSIFLORUM Schrad.

*L. intermedium* A. Gray. Not A. Rich.

*L. apetalum* Asch. and auct. Am. Not Willd. *vide* Thellung.

Apparently of only recent appearance on Nantucket; first observed in September, 1904 — two street-side plants in the town and a small group in waste ground at Siasconset. It was not seen at all in 1906 and 1907. In June, 1908, it was noticed once in

the town and also along a sandy driveway above the cliff. In 1909 it was seen at several places and at as remote a point as the life-saving station near the southwestern end of the island.

Specimens collected at Shimmo Valley farm June 2, 1909, too young for satisfactory determination, but doubtless referable to this species, are noteworthy. They are unusually foliaceous, with the rosulate basal leaves pinnate or deeply pinnatifid with lacinate-dentate segments; the flowers are distinctly petaliferous, the petals varying from rudimentary to 1.5 mm. in length.

\* *LEPIDIUM NEGLECTUM* Thell. (?)

While I think that there can be no doubt about the occurrence of this species on Nantucket, the interrogation mark is employed because the specimens collected are too immature for positive identification. They grew in waste ground at Shimmo Valley farm June 2, 1909, in flower and early fruit.

The plant itself, although common enough in our eastern flora, has not yet made its way into our manuals, and thereby hangs a tale which may appropriately be narrated here. As far back as 1895 I collected in and near Van Cortlandt Park, New York, at three rather widely separated localities, a *Lepidium* which was clearly distinct from any of our eastern species then recognized. In that year Doctor B. L. Robinson had completed his study of the genus *Lepidium* for the Synoptical Flora of North America and I well remember discussing with him the Van Cortlandt specimens at the Columbia University herbarium in its old home in Hamilton Hall. The plant was determined by Doctor Robinson as *Lepidium medium* Greene and so recorded in Syn. Fl. N. Am. 1<sup>1</sup>: 468, published in 1897. Subsequently, in 1898, I collected the same plant in Bronx Park, N. Y., and also on Mt. Desert, Maine, where a single specimen was found in a clearing near the woodland bicycle path. I noticed it also near Short Hills, New Jersey, in 1900, and of late years have found it to be rather well distributed in southwestern Long Island.

In the year 1899 Mr. Percy Wilson collected at random, he tells me, a number of specimens of *Lepidium* at Bedford Park, New York, near the entrance of the New York Botanical Garden. These were forwarded in an exchange of specimens to Doctor Albert Thellung, at Zurich, who, as it happened, was engaged on his

monograph of the genus *Lepidium*, which appeared in 1906. It developed that Mr. Wilson's collection included specimens of *L. virginicum* and of *L. densiflorum*, together with a new species which was described by Doctor Thellung as *Lepidium neglectum* (Bull. Herb. Boiss. II. 4: 708. 1904). This description makes it plain that the new species is precisely the Van Cortlandt Park *Lepidium* already referred to. Doctor Thellung had, in 1903, referred the plant, as had Doctor Robinson, to the *Lepidium medium* of Greene. Its relationship to this southwestern species is indeed close, but an examination of authentic specimens of *L. medium* does not allow me to doubt that Thellung was finally right in regarding the two plants as distinct.

*Lepidium neglectum* is so nearly intermediate between *L. virginicum* and *L. densiflorum* that the question of hybridization is readily suggested. Yet in the behavior of the plant and in its environments as I have observed it, no evidence has appeared, aside from the mere fact of association, that it is not a perfectly true species. The three plants sometimes occupy the same square yard of space, yet *L. neglectum* is also found growing with *L. virginicum* in localities where *L. densiflorum* is unknown.

*Lepidium neglectum*, although discussed by Thellung especially in its relation to *L. densiflorum* has much more the aspect of *L. virginicum*. It is, indeed, sometimes difficult to distinguish from forms of the latter except by reference to the position of the cotyledons in the seed, which is always conclusive — accumbent in *L. virginicum*, incumbent in *L. neglectum*. The most obvious differences from *L. virginicum* are more elongated racemes and shorter-pedicelled and often larger and more orbicular capsules, which become over 3 mm. long and broad; it differs also in the form and texture of the leaves and in the character of the obscure pubescence. In the field it may be useful to recall that it begins to flower considerably earlier than *L. virginicum*.

There need be no uncertainty as between *L. neglectum* and *L. densiflorum*. The former is at once set apart to the eye by its much larger and less crowded, more broadly orbicular capsules, and by its petals, which are always more or less obvious except in the terminal or later flowers, where they may be rudimentary or even absent.



\* *CORONOPUS DIDYMUS* (L.) J. E. Smith.

In the collection of the Nantucket Maria Mitchell Association I found an unmounted fruiting specimen of this wart cress among a series of plants which, Mrs. Albertson informed me, had been collected in or near the town in August, 1908.

\* *THLASPI ARVENSE* L.

Wauwinet, June 11, 1909, a small colony of scattered plants in a waste spot back of the beach, growing with *Brassica arvensis*, *Brassica campestris*, and *Conringia orientalis*. The plants were mostly just beginning to flower, but a few bore good-sized pods.

*SISYMBRIUM LEIOCARPUM* Jord.

A very common weed of farm yards, old fields, and waste ground. First flowers May 30, 1909.

Nothing was seen of typical *Sisymbrium officinale* (L.) Scop., which, although apparently rare in the eastern states, I have collected near New York City and on Long Island.

\* *SISYMBRIUM ALTISSIMUM* L.

A recently introduced weed which threatens to become troublesome. First observed June 12, 1908, two plants just in flower in a field west of the town and a single plant in waste ground on the road to Surfside. The following year it was found in considerable abundance at Shimmo Valley farm and also in a cultivated field on the Miacomet Pond farm, just in flower June 2.

*CAKILE EDENTULA* (Bigelow) Hooker.

Common on sea-beaches. First leaves May 30, 1909; continuing to bear flowers into September.

*BRASSICA CAMPESTRIS* L.

Occasional in old fields and waste places. Back of the shore on the ocean front at Wauwinet it was freshly in flower June 9, 1909; the same day in a waste spot near the town it showed well-developed fruit. Plant pale green and glaucous, fleshy, glabrous, or the lowest leaves bearing obscure scattered hairs; flowers bright, light yellow, the petals about 1 cm. long.

\* *BRASSICA RAPA* L.

Frequent in cultivated fields. Scattered plants in a wheat field near the town were freshly in flower June 13, 1909.

Plant greener and thinner-leaved than *B. campestris*; at least the lower leaves, and often the base of the stem, hispid-pubescent; flowers deeper yellow, rather small, the petals 7–8 mm. long.

\* *BRASSICA NAPUS* L.

About farms and in old fields, sometimes common as a survival of cultivation; occasionally in grain fields. In full flower and with well-developed fruit June 12, 1909. Much stouter and taller than the other associated Brassicas, and very conspicuous when in full bloom. Wholly smooth, blue-glaucous and rather fleshy; flowers resembling those of *Brassica oleracea*, very pale yellow, large, the petals sometimes 18 mm. long.

\* *BRASSICA JUNCEA* (L.) Cosson.

Occasional or frequent about the wharves and streets and in outlying old fields. First flowers June 2, 1909; no flowers observed as late as September.

*BRASSICA NIGRA* (L.) Koch.

Common about the wharves and fishermen's houses and in waste places, beginning to flower later than *B. juncea*. First flowers June 10, 1909; remaining in full flower through September.

\* *BRASSICA ARVENSIS* (L.) Kuntze.

About farms and in old fields and waste places, now generally common but apparently infrequent until recent years. First flowers May 31, 1909; continuing to bloom into September.

\* *DIPLOTAXIS MURALIS* (L.) DC.

Along a cartway in the western outskirts of the town Sept. 11, 1899, some flowers remaining. Not observed since. Plant exhaling an unpleasant odor, suggesting that of *Geranium Robertianum*.

*RAPHANUS RAPHANISTRUM* L.

Abundant in neglected and in cultivated fields. First flowers May 30, 1909; remaining in bloom through September.

\* *RAPHANUS SATIVUS* L.

Met with several times near cultivated ground and in waste places. First flowers May 30, 1909; also in full flower at the middle of September.

BARBAREA RIVULARIS Martr. Pl. Crit. du Tarn. 1: 9. 1862; Fl. Tarn. 44. 1864.

*Barbarea stricta* auct. Am. Not Andrz.

A plant of comparatively recent introduction to Nantucket and now fast becoming widely established. Mrs. Owen reports *Barbarea vulgaris* as having first appeared in 1883; this record probably refers to the species here discussed, which was not at that time generally recognized as distinct from *B. vulgaris*. In September, 1889, I observed two plants in a weedy alley in the town, but saw nothing more of it until June, 1908, when a few plants were observed near the old wharves and by a street-side in the town and a mass of it occupied a shallow gully in the side of the cliff. The next year it had spread extensively and was seen at a number of points in the town as well as in fields near by, and at such distant points as Miacomet Pond farm, Hummock Pond and the life-saving station at the southwestern side of the island. In full flower May 30, 1909.

\* RADICULA NASTURTIUM-AQUATICUM (L.) Britten & Rendle.

Growing in luxuriant masses about springs and ditches at Shawaukenmo; Watt's Run; near Reed Pond. First flowers May 30, 1909.

\* RADICULA PALUSTRIS (L.) Moench.

A group of half a dozen plants just in flower June 6, 1909, at edge of pool by the Madequet road, just beyond Crooked Lane.

\* RADICULA ARMORACIA (L.) Robinson.

Frequent in and near the town; ditch in Polpis. Just in flower May 30, 1909.

CARDAMINE PENNSYLVANICA Muhl.

Not common; ditches west and southwest of the town; Quaise; Polpis; Watt's Run. In full flower May 31, 1909.

Along Watt's Run, in the shade of a dense thicket, occurs a lax and slender form which so closely simulates *Cardamine flexuosa* With. that it required a close examination of the siliques and styles to convince me that it was not that species.

\* CARDAMINE ARENICOLA Britton.

Wet meadow west of the town; Shawkemo; muddy border of sink-hole near Tristram Coffin's Homestead. In full flower May 31, 1909.

BURSA BURSA-PASTORIS (L.) Britton.

A common weed occurring in various more or less distinct forms or elementary species.

DRABA VERNA L.

Common in sandy fields and along roadsides in and near the town ; Monomoy ; Shawkemo. Plants past flowering and mostly dried up by May 30, 1909, but in protected spots still green and retaining mature fruit. On June 7, 1908, only withered plants were to be found, many retaining the dried septa of the pods.

\* ERYSIMUM CHEIRANTHOIDES L.

Two plants in waste ground at Shimmo Valley farm, just in flower June 2, 1909.

\* ALYSSUM ALYSSOIDES L.

Along a sandy bank and adjoining grassy level by an old stone foundation on the cliff. In full flower and fruit June 2, 1909. Petals at first yellow, early becoming pure white.

\* CONRINGIA ORIENTALIS (L.) Dumort.

Wauwinet, June 11, 1909, two plants just in flower in waste spot back of the beach with *Thlaspi arvense*, *Brassica arvensis*, and *Brassica campestris*. Petals palest yellow or cream-colored.

*Note.* — *Hesperis matronalis* L. is occasionally found by street-sides in the town as a casual escape from adjoining gardens.

## RESEDACEAE

RESEDA LUTEA L.

Reported by Mrs. Owen, on the authority of Mr. Dame, as being well established in a pasture in Polpis in August, 1886.

## SARRACENIACEAE

SARRACENIA PURPUREA L.

Occurs in a few sphagnum bogs between Polpis and Sachacha. In one of the larger bogs it was numerous enough to be rather conspicuous when in full flower June 15, 1908.

## DROSERACEAE

DROSERA ROTUNDIFOLIA L.

Common in sandy and peaty bogs.

DROSERA LONGIFOLIA L.

Common in bogs and on pond shores.

DROSERA FILIFORMIS Raf.

Common on the sandy shores of Tom Never's Pond and sparingly near the head of the swamp. A single flower as late as Sept. 15, 1907.

CRASSULACEAE

TILLAEASTRUM VAILLANTII (Willd.) Britton.

One of the rarer plants of which we have earliest record on Nantucket is the *Tillaea simplex* of Nuttall, which was recorded by William Oakes as having been collected by him in 1829 "on the dried borders of small ponds" (Hovey's Mag. 7: 182. 1841). Writing in 1888, Mrs. Owen says "Not reported since." In the herbarium of the Nantucket Maria Mitchell Association and of the New York Botanical Garden are Nantucket specimens of the plant now referred to *Tillaeastrum Vaillantii* (Willd.) Britton which were collected by Mrs. Mabel P. Robinson on the shore of Hummock Pond Aug. 15, 1894, and July, 1896. Mrs. Albertson has informed me that the plant still grows at that locality, having been collected there in very recent years.

Whether *Tillaeastrum Vaillantii* (Willd.) Britton is really distinct from *Tillaeastrum aquaticum* (L.) Britton (*Tillaea simplex* Nutt.) cannot yet be said to be satisfactorily established. The only diagnostic character adduced for *T. Vaillantii* would seem to be the slender peduncle, but such a character might well prove to be an unstable one in a shore plant which is doubtless sometimes subject to submersion, and it remains to be determined whether the elongation of the peduncle is not related to a chance submersion of the plant during some period of its growth. In one of Mrs. Robinson's Nantucket specimens the lower flowers only are peduncled, the uppermost being sessile.

Should the two plants be distinct, it is not improbable that both are to be credited to Nantucket and that Oakes was quite correct in his record of *Tillaea simplex*, which plant, in its perfectly typical form, was collected on Marthas Vineyard, not twenty miles from Nantucket, on September 27, 1909.

\* *SEDUM PURPUREUM* Tausch.

Bank near the Orange Street railroad crossing ; dry field over a mile west of the town. First observed June, 1908.

*SEDUM ACRE* L.

At two localities in dry fields near Millbrook Swamp ; bank on Grove Lane ; Poor House grounds and roadsides near by.

GROSSULARIACEAE

*GROSSULARIA HIRTELLA* (Michx.) Spach.

Thickets or open ground either in dry or moist soils, sometimes in open boggy places. In full bloom May 31, 1909, a few flowers as late as June 20 ; some fruit nearly full size June 7.

Not a few of the plants of Nantucket differ from the ordinary form of their species found on the mainland. The variations from their common types displayed by such species may be either slight and inconstant or well emphasized and firmly established. And there may be discerned a tendency in a number of species of widely different relationships to follow similar lines of variation, thus affording a hint of some broad influence operating in the flora of the island.

The reduced stature of arboreal species on a wind-swept island may be readily understood and is doubtless correlated with an increased horizontal growth of the branches and their development low on the trunk, or from its base, which is a frequent condition of Nantucket trees.

In the herbaceous species which show obvious departures from their usual forms it seems possible to recognize a drift of variation in two main directions, one towards an increased development of pubescence, the other leading to a tendency in certain erect or ascending species to become declined or even prostrate.

The Nantucket gooseberry is a marked example of a species modified by an unusual development of pubescence. In its extreme form the young branches, petioles, and lower leaf surfaces are densely white-tomentose and the upper surfaces of the leaves closely soft-pubescent. This increased pubescence often extends to the flowers, which become notably villous, and to the fruit, which is sometimes finely puberulent all over and may even de-

velop an occasional weak spine. In other more variable characters the plant is also noteworthy. The leaves are often smaller and thicker than in the typical form with the larger veins distinctly impressed above ; they may also be duller green in color, less deeply cleft, less sharply dentate and with more obtuse lobes. Parts of the stem and branches are often densely bristly but, by the exfoliation of the pale outer bark, become bright reddish brown and wholly unarmed except for the infra-axillary spines.

This form of the plant is the prevailing one on Nantucket. The typical plant also occurs and each form appears to shade insensibly into the other.

Many specimens of the pubescent form are identical with typical material of *Ribes oxycanthoides*, var. *calicicola* Fernald, from the Province of Quebec (Rhodora 7 : 153-155. Au 1905).